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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,223	01/07/2004	Carl D. Schleuder	6978-198/COA	5710
27572	7590	01/12/2005	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			PANG, ROGER L	
			ART UNIT	PAPER NUMBER
			3681	

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/753,223

Applicant(s)

SCHLEUDER ET AL.

Examiner

Roger L Pang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

### DETAILED ACTION

The following action is in response to application 10/753,223 filed on January 7, 2004.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, and 4-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimizu '238. With regard to claim 1, Shimizu teaches a transfer case comprising: a one-piece housing 11 (left side) defining first and second apertures aligned on a first axis and a third aperture aligned on a second axis (Fig. 1); a first cover plate C enclosing said first aperture and defining a first opening; a second cover plate enclosing said third aperture and defining a second opening (Fig. 1); an input shaft 12 extending through said first opening; a first tubular output shaft 13 driven by said input shaft and having a small diameter pilot segment supported by said input shaft, a large diameter shaft segment extending through said second aperture, and a transition segment interconnecting said pilot segment and said shaft segment (Fig. 1); a second tubular output shaft 14 having a pilot segment supported by said housing and a shaft segment extending through said second opening (Fig. 1); and a coupling mechanism 60 for selectively coupling said second output shaft to said first output shaft. With regard to claim 2, Shimizu teaches the case, wherein said first cover plate includes a plate segment interconnecting first and second hub segments, said first opening in said first cover plate extending through said first hub segment, and wherein said second hub segment is sealed against said one-piece housing (Fig. 1). With regard to claim

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4, Shimizu teaches the case wherein said first output shaft is formed to include a tapered transition segment interconnecting said pilot segment to said shaft segment (Fig. 1; after the needle bearings). With regard to claim 5, Shimizu teaches the case wherein said coupling mechanism includes a first sprocket 61 that is rotatable relative to said shaft segment of said first output shaft, a second sprocket 62 fixed to said shaft segment of said second output shaft, a chain 63 for coupling said second sprocket to said first sprocket, and a mode clutch 72 operable for selectively coupling said first sprocket to said first output shaft. With regard to claim 6, Shimizu teaches the case wherein said first axis is parallel to said second axis (Fig. 1). With regard to claim 7, Shimizu teaches a transfer case comprising: a one-piece housing 11 (left side) defining first and second apertures aligned on a first axis and a third aperture and a boss portion aligned on a second axis (Fig. 1); a first cover plate C enclosing said first aperture and defining a first opening; a second cover plate enclosing said third aperture and defining a second opening (Fig. 1); an input shaft 12 extending through said first opening; a first tubular output shaft 13 having a first diameter pilot segment supported by said input shaft, a second diameter shaft segment extending through said second aperture (Fig. 1), and a variable diameter transition segment interconnecting said pilot segment and said shaft segment (Fig. 1; after the needle bearings); a second tubular output shaft 14 having a pilot segment supported in said boss portion of said housing and a shaft segment extending through said second opening (Fig. 1); and a coupling mechanism 60 for selectively coupling said second output shaft to said first output shaft. With regard to claim 8, see rejection of claim 2. With regard to claim 9, see rejection of claim 5.

***Claim Rejections - 35 USC § 103***

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu. Shimizu teaches the case wherein said first and second tubular output shafts each comprise a formed tube, but lacks the specific teaching that the metallurgical grain structure is generally continuous. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Shimizu to employ output shafts with generally continuous metallurgical grain structures, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

#### ***Allowable Subject Matter***

Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kuwahara, Schleuder, Krisher, Zalewski and Brown have been cited to show similar transfer cases and output shafts.

FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is (703) 305-3597. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

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Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office (Fax No. (703) 305-3597) on \_\_\_\_\_ (Date)

Typed or printed name of person signing this certificate:

\_\_\_\_\_  
\_\_\_\_\_

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roger L Pang whose telephone number is 703-305-0445. The examiner can normally be reached on 5:30am to 4:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on 703-308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Roger L Pang  
Patent Examiner  
Art Unit 3681

January 7, 2005